

Austausch FC-HBA bei Sun Solaris - Teil 3

23.07.2007 Otmanix

Gesamtplan

- Sicherheitshalber Rechner durchstarten und Bootvorgang/Protokolle prüfen (sauberen Ausgangszustand für Umbau schaffen)
- Rechner herunterfahren und ausschalten
- IB7 ausbauen
- HBA in Slot 3 ausbauen und ab in den Müll
- HBA in Slot 6 ausbauen (Ersatz)
- IB7 einbauen
- Rechner einschalten, boot
- /etc/vfstab anpassen, Filesysteme aushängen
- Überflüssige Devices entfernen
- Rechner herunterfahren und ausschalten
- IB7 ausbauen
- Ersatz-HBA in Slot 3 einbauen
- IB7 einbauen
- Rechner einschalten, boot -r
- Zoning anpassen
- Masking anpassen
- sd-Treiber neu laden, Devices anlegen lassen
- Powerpath konfigurieren
- /etc/vfstab anpassen, Filesysteme einhängen
- Sicherheitshalber Rechner durchstarten und Bootvorgang/Protokolle prüfen (sauberen Ausgangszustand für Betrieb schaffen)

Sauberen Ausgangszustand für Umbau schaffen

Das fällt unter die Kategorie "nice to have" und hängt davon ab welches Zeitfenster für die Wartungsarbeiten zur Verfügung steht. Spielt Zeit eine untergeordnete Rolle sollte das auf jeden Fall durchgeführt werden.

- Anwendungen herunterfahren
- Anmelden am Systemcontroller in der passenden Domain
- Server herunterfahren
- Autoboot im OBP ausschalten
- Server hochfahren

login as: **root**

System Controller 'sf6800-sc0':

```
Type 0 for Platform Shell
Type 1 for domain A console
Type 2 for domain B console
Type 3 for domain C console
Type 4 for domain D console
```

Input: **3**

Connected to Domain C

server console login: **root**

Password:

Last login: Sat Jul 21 08:28:59 from pc0815

Jul 21 08:31:38 server login: ROOT LOGIN /dev/console

Sun Microsystems Inc. SunOS 5.9 Generic May 2002

You have new mail.

Sun Microsystems Inc. SunOS 5.9 Generic May 2002

You have new mail.

Sourcing //.profile-EIS.....

DISPLAY=

uptime

8:33am up 147 day(s), 19:03, 3 users, load average: 0.43, 0.17, 0.10

init 0

#

INIT: New run level: 0

The system is coming down. Please wait.

System services are now being stopped.

EMC Control Center Master Agent stopping ...

EMC Control Center Master Agent stopped.

Discovery client has been stopped

Sun Microsystems Inc. SunOS 5.9 Generic May 2002

Sun Microsystems Inc. SunOS 5.9 Generic May 2002

...

The system is down.

syncing file systems... done

NOTICE: f_client_exit: Program terminated!

debugger entered.

{d} ok **printenv**

Variable	Value	(Default Value)
----------	-------	-----------------

nvramrc

```

0: devalias rootmirr /ssm@0,0/pci@1b,700000/pci@1/SUNW,isptwo@4/sd@0,0
1: devalias rootdisk /ssm@0,0/pci@1a,700000/pci@1/SUNW,isptwo@4/sd@0,0
2: devalias cdrom /ssm@0,0/pci@1a,700000/pci@1/SUNW,isptwo@4/sd@6,0:f
3: ." ChassisSerialNumber xxx " cr
secondary-diag?      false                (false)
auto-boot-timeout    512                (512)
scsi-initiator-id    7                  (7)
powerfail-time       0                  (0)
fcode-debug?        true                 (true)
output-device        /sgcn              (/sgcn)
input-device         /sgcn              (/sgcn)
load-base            0x4000             (0x4000)
boot-command         boot                (boot)
auto-boot?          true                 (true)
error-reset-recovery sync              (sync)
diag-file            ()
boot-file            ()
diag-device          rootmirr rootdisk    (disk diskifp diskglm diskc net)
boot-device          rootmirr rootdisk    (disk diskifp diskglm diskc net)
local-mac-address?   true                (false)
ansi-terminal?       true                (true)
screen-#columns      80                (80)
screen-#rows         34                (34)
silent-mode?         false               (false)
use-nvramrc?         true                (false)
oem-logo             ()
oem-logo?            false               (false)
oem-banner           ()
oem-banner?          false               (false)
security-mode        none                (none)
security-password    ()
security-#badlogins  ()
hardware-revision    ()
last-hardware-update ()
#power-cycles        ()
diag-switch?         false               (false)

```

```
{d} ok setenv auto-boot? false
```

```
auto-boot? = false
```

```
{d} ok printenv
```

```
Variable          Value                (Default Value)
```

```
-----
```

```
nvramrc
0: devalias rootmirr /ssm@0,0/pci@1b,700000/pci@1/SUNW,isptwo@4/sd@0,0
1: devalias rootdisk /ssm@0,0/pci@1a,700000/pci@1/SUNW,isptwo@4/sd@0,0
2: devalias cdrom /ssm@0,0/pci@1a,700000/pci@1/SUNW,isptwo@4/sd@6,0:f
3: ." ChassisSerialNumber xxx " cr
secondary-diag?      false                (false)
auto-boot-timeout    512                (512)
scsi-initiator-id    7                  (7)
powerfail-time       0                  (0)
fcode-debug?        true                 (true)
output-device        /sgcn              (/sgcn)
input-device         /sgcn              (/sgcn)
load-base            0x4000             (0x4000)
boot-command         boot                (boot)
auto-boot?          false               (true)
error-reset-recovery sync              (sync)
diag-file            ()
boot-file            ()
diag-device          rootmirr rootdisk    (disk diskifp diskglm diskc net)
boot-device          rootmirr rootdisk    (disk diskifp diskglm diskc net)
local-mac-address?   true                (false)
ansi-terminal?       true                (true)
screen-#columns      80                (80)
screen-#rows         34                (34)
silent-mode?         false               (false)
use-nvramrc?         true                (false)
oem-logo             ()
oem-logo?            false               (false)
oem-banner           ()
oem-banner?          false               (false)
security-mode        none                (none)
security-password    ()
security-#badlogins  ()
hardware-revision    ()
last-hardware-update ()
#power-cycles        ()
diag-switch?         false               (false)

```

```
{d} ok boot
```

```
Resetting ...
```

```
Loading the test table from board SB1 PROM 0 ...
```

```
Loading the test table from board IB7 PROM 0 ...
```

```
Copying IO PROM to CPU DRAM
```

```

.{/N0/SB1/P0} @(#) lpost      5.20.1  2006/06/05 17:38
{/N0/SB1/P0} Copyright 2006 Sun Microsystems, Inc.  All rights reserved.
{/N0/SB1/P1} @(#) lpost      5.20.1  2006/06/05 17:38
.{/N0/SB1/P0} Use is subject to license terms.
{/N0/SB1/P1} Copyright 2006 Sun Microsystems, Inc.  All rights reserved.
{/N0/SB1/P1} Use is subject to license terms.

```

```

.....
{/N0/SB1/P0} Running PCI IO Controller Basic Tests
{/N0/SB1/P0} Jumping to memory 00000000.00000020 [00000010]
{/N0/SB1/P0} System PCI IO post code running from memory
{/N0/SB1/P0} @(#) lpost      5.20.1  2006/06/05 17:42
{/N0/SB1/P0} Running PCI IO Controller Functional Tests
{/N0/SB1/P0} Copyright 2006 Sun Microsystems, Inc.  All rights reserved.
{/N0/SB1/P0} Use is subject to license terms.
{/N0/SB1/P0} Subtest: PCI IO Controller Register Initialization for aid 0x1a
{/N0/SB1/P0} Running PCI IO Controller Ecc Tests
{/N0/SB1/P0} Running SBBC Basic Tests

```

```
{/NO/SB1/P0} Subtest: SBBC PCI Reg Initialization for aid 0x1a
{/NO/SB1/P0} Running Probe io Devices
{/NO/SB1/P0} Running PCI IO Controller Basic Tests
{/NO/SB1/P0} Subtest: PCI IO Controller Register Initialization for aid 0x1b
{/NO/SB1/P0} Running PCI IO Controller Functional Tests
{/NO/SB1/P0} Running PCI IO Controller Ecc Tests
{/NO/SB1/P0} Running Probe io Devices
{/NO/SB1/P0} @(#) lpost          5.20.1   2006/06/05 17:38
{/NO/SB1/P0} Copyright 2006 Sun Microsystems, Inc. All rights reserved.
{/NO/SB1/P0} Use is subject to license terms.
{/NO/IB7/P0} Passed
{/NO/IB7/P1} Passed
{/NO/SB1/P0} Running Domain Level Tests
{/NO/SB1/P2} @(#) lpost          5.20.1   2006/06/05 17:38
{/NO/SB1/P3} @(#) lpost          5.20.1   2006/06/05 17:38
{/NO/SB3/P0} @(#) lpost          5.20.1   2006/06/05 17:38
{/NO/SB3/P1} @(#) lpost          5.20.1   2006/06/05 17:38
{/NO/SB3/P2} @(#) lpost          5.20.1   2006/06/05 17:38
{/NO/SB3/P3} @(#) lpost          5.20.1   2006/06/05 17:38
{/NO/SB5/P0} @(#) lpost          5.20.1   2006/06/05 17:38
{/NO/SB5/P1} @(#) lpost          5.20.1   2006/06/05 17:38
{/NO/SB5/P2} @(#) lpost          5.20.1   2006/06/05 17:38
{/NO/SB5/P3} @(#) lpost          5.20.1   2006/06/05 17:38
{/NO/SB1/P2} Copyright 2006 Sun Microsystems, Inc. All rights reserved.
{/NO/SB1/P3} Copyright 2006 Sun Microsystems, Inc. All rights reserved.
{/NO/SB3/P0} Copyright 2006 Sun Microsystems, Inc. All rights reserved.
{/NO/SB3/P1} Copyright 2006 Sun Microsystems, Inc. All rights reserved.
{/NO/SB3/P2} Copyright 2006 Sun Microsystems, Inc. All rights reserved.
{/NO/SB3/P3} Copyright 2006 Sun Microsystems, Inc. All rights reserved.
{/NO/SB5/P0} Copyright 2006 Sun Microsystems, Inc. All rights reserved.
{/NO/SB5/P1} Copyright 2006 Sun Microsystems, Inc. All rights reserved.
{/NO/SB5/P2} Copyright 2006 Sun Microsystems, Inc. All rights reserved.
{/NO/SB5/P3} Copyright 2006 Sun Microsystems, Inc. All rights reserved.
{/NO/SB1/P0} Running Domain Basic Tests
{/NO/SB1/P2} Use is subject to license terms.
{/NO/SB1/P3} Use is subject to license terms.
{/NO/SB3/P0} Use is subject to license terms.
{/NO/SB3/P1} Use is subject to license terms.
{/NO/SB3/P2} Use is subject to license terms.
{/NO/SB3/P3} Use is subject to license terms.
{/NO/SB5/P0} Use is subject to license terms.
{/NO/SB5/P1} Use is subject to license terms.
{/NO/SB5/P2} Use is subject to license terms.
{/NO/SB5/P3} Use is subject to license terms.
{/NO/SB1/P0} Running Domain Advanced Tests
{/NO/SB1/P0} Running Domain Stick Sync Tests
{/NO/SB1/P0} Running Domain Verify Stick Sync Tests
{/NO/SB1/P0} DCB_DECOMP_OBP command succeeded
{/NO/SB1/P0} Committing retained memory 00000000.00966000-00000000.00967fff
{/NO/SB1/P0} Retaining 00000000.00966000-00000000.00967fff
{/NO/SB1/P0} Committing retained memory 00000000.00982000-00000000.00983fff
{/NO/SB1/P0} Retaining 00000000.00982000-00000000.00983fff
{/NO/SB1/P0} CORE 5 clearing 00000000.00000000 to 00000000.000c8800
{/NO/SB1/P0} CORE 6 clearing 00000000.000c8800 to 00000000.00191000
{/NO/SB1/P0} CORE 7 clearing 00000000.00191000 to 00000000.00259800
{/NO/SB1/P0} CORE 12 clearing 00000000.00259800 to 00000000.00322000
{/NO/SB1/P0} CORE 13 clearing 00000000.00322000 to 00000000.003ea800
{/NO/SB1/P0} CORE 14 clearing 00000000.003ea800 to 00000000.004b3000
{/NO/SB1/P0} CORE 15 clearing 00000000.004b3000 to 00000000.0057b800
{/NO/SB1/P0} CORE 20 clearing 00000000.0057b800 to 00000000.00644000
{/NO/SB1/P0} CORE 21 clearing 00000000.00644000 to 00000000.0070c800
{/NO/SB1/P0} CORE 22 clearing 00000000.0070c800 to 00000000.007d5000
{/NO/SB1/P0} CORE 23 clearing 00000000.007d5000 to 00000000.0089d800
{/NO/SB1/P0} CORE 4 clearing 00000000.0089d800 to 00000000.00966000
{/NO/SB1/P0} CORE 5 clearing 00000000.00966000 to 00000000.0096a280
{/NO/SB1/P0} CORE 6 clearing 00000000.0096a280 to 00000000.0096c500
{/NO/SB1/P0} CORE 7 clearing 00000000.0096c500 to 00000000.0096e780
{/NO/SB1/P0} CORE 12 clearing 00000000.0096e780 to 00000000.00970a00
{/NO/SB1/P0} CORE 13 clearing 00000000.00970a00 to 00000000.00972c80
{/NO/SB1/P0} CORE 14 clearing 00000000.00972c80 to 00000000.00974f00
{/NO/SB1/P0} CORE 15 clearing 00000000.00974f00 to 00000000.00977180
{/NO/SB1/P0} CORE 20 clearing 00000000.00977180 to 00000000.00979400
{/NO/SB1/P0} CORE 21 clearing 00000000.00979400 to 00000000.0097b680
{/NO/SB1/P0} CORE 22 clearing 00000000.0097b680 to 00000000.0097d900
{/NO/SB1/P0} CORE 23 clearing 00000000.0097d900 to 00000000.0097fb80
{/NO/SB1/P0} CORE 4 clearing 00000000.0097fb80 to 00000000.00982000
{/NO/SB1/P0} CORE 5 clearing 00000000.00982000 to 00000000.ab363a80
{/NO/SB1/P0} CORE 6 clearing 00000000.ab363a80 to 00000001.55d43500
{/NO/SB1/P0} CORE 7 clearing 00000001.55d43500 to 00000002.00722f80
{/NO/SB1/P0} CORE 12 clearing 00000002.00722f80 to 00000002.ab102a00
{/NO/SB1/P0} CORE 13 clearing 00000002.ab102a00 to 00000003.55ae2480
{/NO/SB1/P0} CORE 14 clearing 00000003.55ae2480 to 00000004.004c1f00
{/NO/SB1/P0} CORE 15 clearing 00000004.004c1f00 to 00000004.aaaa1980
{/NO/SB1/P0} CORE 20 clearing 00000004.aaaa1980 to 00000005.55881400
{/NO/SB1/P0} CORE 21 clearing 00000005.55881400 to 00000006.00260e80
{/NO/SB1/P0} CORE 22 clearing 00000006.00260e80 to 00000006.aac40900
{/NO/SB1/P0} CORE 23 clearing 00000006.aac40900 to 00000007.55620380
{/NO/SB1/P0} CORE 4 clearing 00000007.55620380 to 00000008.00000000
{/NO/SB1/P0} CORE 5 clearing 00000020.00000000 to 00000020.2aaaaa80
{/NO/SB1/P0} CORE 6 clearing 00000020.2aaaaa80 to 00000020.55555500
{/NO/SB1/P0} CORE 7 clearing 00000020.55555500 to 00000020.7fffff80
{/NO/SB1/P0} CORE 12 clearing 00000020.7fffff80 to 00000020.aaaaaa00
{/NO/SB1/P0} CORE 13 clearing 00000020.aaaaaa00 to 00000020.d5555480
{/NO/SB1/P0} CORE 14 clearing 00000020.d5555480 to 00000020.ffffff00
{/NO/SB1/P0} CORE 15 clearing 00000020.ffffff00 to 00000021.2aaaa980
{/NO/SB1/P0} CORE 20 clearing 00000021.2aaaa980 to 00000021.55555400
{/NO/SB1/P0} CORE 21 clearing 00000021.55555400 to 00000021.7ffffe80
{/NO/SB1/P0} CORE 22 clearing 00000021.7ffffe80 to 00000021.aaaaa900
{/NO/SB1/P0} CORE 23 clearing 00000021.aaaaa900 to 00000021.d5555380
{/NO/SB1/P0} CORE 4 clearing 00000021.d5555380 to 00000022.00000000
```

```
{/NO/SB1/P0} CORE 5 clearing 00000040.00000000 to 00000040.2aaaaa80
{/NO/SB1/P0} CORE 6 clearing 00000040.2aaaaa80 to 00000040.55555500
{/NO/SB1/P0} CORE 7 clearing 00000040.55555500 to 00000040.7fffff80
{/NO/SB1/P0} CORE 12 clearing 00000040.7fffff80 to 00000040.aaaaaa00
{/NO/SB1/P0} CORE 13 clearing 00000040.aaaaaa00 to 00000040.d5555480
{/NO/SB1/P0} CORE 14 clearing 00000040.d5555480 to 00000040.ffffff00
{/NO/SB1/P0} CORE 15 clearing 00000040.ffffff00 to 00000041.2aaaa980
{/NO/SB1/P0} CORE 20 clearing 00000041.2aaaa980 to 00000041.55555400
{/NO/SB1/P0} CORE 21 clearing 00000041.55555400 to 00000041.7ffffe80
{/NO/SB1/P0} CORE 22 clearing 00000041.7ffffe80 to 00000041.aaaaa900
{/NO/SB1/P0} CORE 23 clearing 00000041.aaaaa900 to 00000041.d5555380
{/NO/SB1/P0} CORE 4 clearing 00000041.d5555380 to 00000042.00000000
{/NO/SB1/P0} Decompress OBP done
{/NO/SB1/P0} DCB_ENTER_OBP command succeeded
{/NO/SB1/P1} DCB_ENTER_OBP command succeeded
{/NO/SB1/P2} DCB_ENTER_OBP command succeeded
{/NO/SB1/P3} DCB_ENTER_OBP command succeeded
{/NO/SB3/P0} DCB_ENTER_OBP command succeeded
{/NO/SB3/P1} DCB_ENTER_OBP command succeeded
{/NO/SB3/P2} DCB_ENTER_OBP command succeeded
{/NO/SB3/P3} DCB_ENTER_OBP command succeeded
{/NO/SB5/P0} DCB_ENTER_OBP command succeeded
{/NO/SB5/P1} DCB_ENTER_OBP command succeeded
{/NO/SB5/P2} DCB_ENTER_OBP command succeeded
{/NO/SB5/P3} DCB_ENTER_OBP command succeeded
```

ChassisSerialNumber xxx

!!! LP9002 Fcode, Copyright (c) 2005 Emulex !!! Version 1.50a4

!!! LP9002 Fcode, Copyright (c) 2005 Emulex !!! Version 1.50a4

!!! LP9002 Fcode, Copyright (c) 2005 Emulex !!! Version 1.50a4

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!!! LP9002 Fcode, Copyright (c) 2005 Emulex !!! Version 1.50a4

Sun Fire 6800

OpenFirmware version 5.20.1 (06/05/06 17:37)

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Use is subject to license terms.

SmartFirmware, Copyright (C) 1996-2001. All rights reserved.

49152 MB memory installed, Serial #xxx.

Ethernet address xxx, Host ID: xxx.

Rebooting with command: boot

SunOS Release 5.9 Version Generic_118558-25 64-bit

Copyright 1983-2003 Sun Microsystems, Inc. All rights reserved.

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NOTICE:

Emulex LightPulse FC SCSI/IP 6.02f

NOTICE: lpfc0: Firmware Rev 3.92A3 (C2D3.92A3)

NOTICE: lpfc0: Fcode Rev 1.50a4

NOTICE: lpfc0: WWPN:10:00:00:00:c9:32:6b:95 WWNN:20:00:00:00:c9:32:6b:95 DID 0x81500

NOTICE: lpfc1: Firmware Rev 3.92A3 (C2D3.92A3)

NOTICE: lpfc1: Fcode Rev 1.50a4

NOTICE: lpfc1: WWPN:10:00:00:00:c9:32:6b:96 WWNN:20:00:00:00:c9:32:6b:96

NOTICE: lpfc4: Firmware Rev 3.92A3 (C2D3.92A3)

NOTICE: lpfc4: Fcode Rev 1.50a4

NOTICE: lpfc4: WWPN:10:00:00:00:c9:32:6b:c5 WWNN:20:00:00:00:c9:32:6b:c5

NOTICE: lpfc5: Firmware Rev 3.92A3 (C2D3.92A3)

NOTICE: lpfc5: Fcode Rev 1.50a4

NOTICE: lpfc5: WWPN:10:00:00:00:c9:32:6b:c6 WWNN:20:00:00:00:c9:32:6b:c6

NOTICE: lpfc2: Firmware Rev 3.92A3 (C2D3.92A3)

NOTICE: lpfc2: Fcode Rev 1.50a4

NOTICE: lpfc2: WWPN:10:00:00:00:c9:30:0d:33 WWNN:20:00:00:00:c9:30:0d:33 DID 0xa1500

NOTICE: lpfc3: Firmware Rev 3.92A3 (C2D3.92A3)

NOTICE: lpfc3: Fcode Rev 1.50a4

NOTICE: lpfc3: WWPN:10:00:00:00:c9:30:0d:34 WWNN:20:00:00:00:c9:30:0d:34 DID 0xb1500

WARNING: forcload of misc/md_trans failed

WARNING: forcload of misc/md_raid failed

WARNING: forcload of misc/md_hotspares failed

obpsym: symbolic debugging is available.

Hardware watchdog enabled

configuring IPv4 interfaces: ce0 ce1.

Hostname: server

Setting up paths

The system is coming up. Please wait.

checking ufs filesystems

/dev/md/rdisk/d40: is logging.

/dev/md/rdisk/d36: is logging.

/dev/md/rdisk/d32: is logging.

/dev/md/rdisk/d33: is logging.

/dev/md/rdisk/d30: is logging.

/dev/md/rdisk/d35: is logging.

/dev/md/rdisk/d31: is logging.

Starting cpudiagd ... done.

starting rpc services: rpcbind keyserv done.

...

```
syslog service starting.  
- Setze Umgebungsvariablen fuer Legato NetWorker Server...  
starting NetWorker daemons:  
nsrexecd  
EMC Control Center Master Agent starting ...  
...  
The system is ready.  
  
server console login: root  
Password:  
Last login: Sat Jul 21 08:50:14 from pc0815  
Jul 21 08:51:55 server login: ROOT LOGIN /dev/console  
Sun Microsystems Inc. SunOS 5.9 Generic May 2002  
You have new mail.  
Sun Microsystems Inc. SunOS 5.9 Generic May 2002  
You have new mail.  
Sourcing //.profile-EIS.....
```

DISPLAY=

#

Auch dmesg bzw. /var/adm/messages zeigen keine neuen Probleme. Somit kann mit den eigentlichen Wartungsarbeiten begonnen werden.